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MAR 9 1945

Department of Agriculture

PIONEER

Hybrids

FOR 1945

VIGOROUS GERMINATION



low

PIONEER

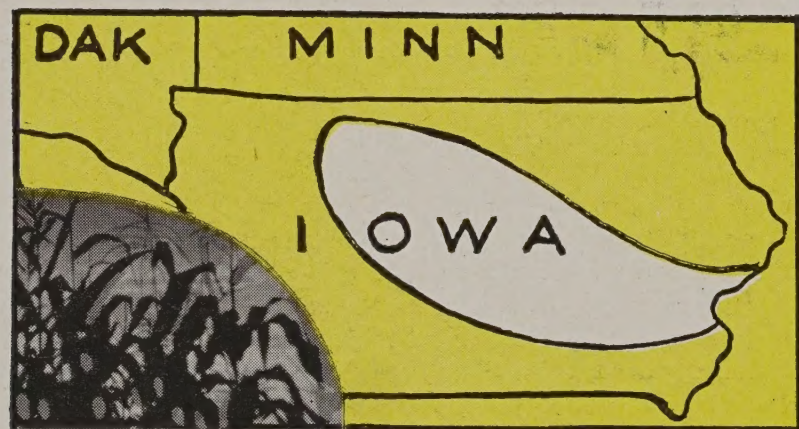
Hybrids have

CAREFULLY SORTED ✓ GRADED ✓ TESTED ✓



RESEARCH

Pioneer's efficient research staff is continually experimenting and searching for the hidden superior characteristics in old and new inbred strains. Each year they strive to develop hybrid combinations more productive and better adapted to the various corn belt conditions. Under the watchful eyes of these scientists, those few promising combinations discovered out of the many made and tested, must prove themselves superior year after year, before they are released for commercial production.



GROWN SOUTH

Pioneer hybrid seed corn is produced mainly in the south central corn belt for protection from early frost and to assure you of fully matured seed and undamaged germination. This protection from early frost helps to account for the consistent good stands produced by Pioneer. The maturity of a hybrid is determined by its parents and not by the locality in which it is produced.



COLD TEMPERATURE TEST 50° F.

GERMINATION

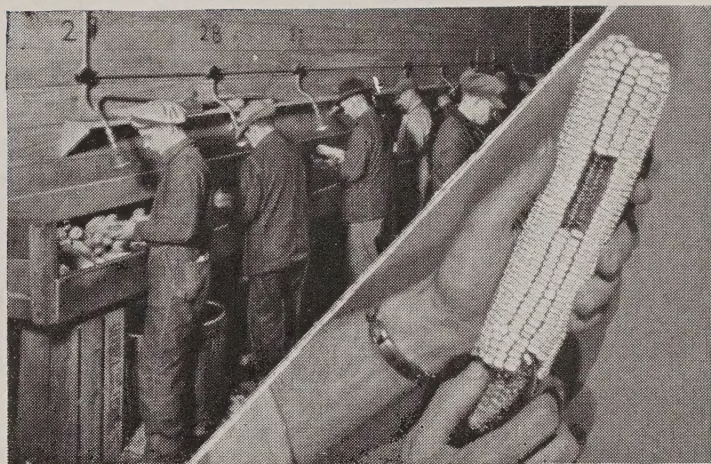
Pioneer seed corn is tested by the usual germination tests. In addition, it must germinate vigorously in two separately conducted cold tests, where only the strong will survive.

Representative samples of all Pioneer seed, imbedded in trays of moist corn field soil, are subjected for seven days to a COLD TEST in refrigerators held at 50 degrees temperature. The corn is then transferred to the warm germinators.

STRONG GERMINATION

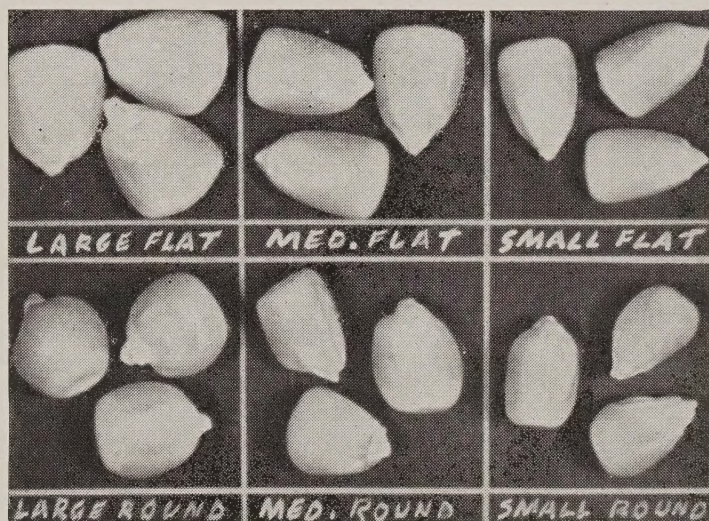
SORTING

Soon after the corn is harvested from Pioneer seed fields, trained workers carefully hand sort it ear by ear. Corn unsatisfactory for seed is discarded. Damaged kernels are picked out of the good ears—and the weak, chaffy, moldy and off-type ears are thrown out. On the average, about 140 pounds of ear corn from the field on October 1st is required to produce a bushel of sorted, dried, shelled and graded Pioneer hybrid seed.



GRADING

Pioneer hybrid seed corn is accurately graded into six uniform kernel sizes—large, medium and small flat—large, medium and small round. Grading machines efficiently divide the kernels—blow out those which are light and chaffy—remove tips and cracked kernels, leaving only the clean, healthy seed. The size or shape of a Pioneer seed kernel bears no relation to the yield, size or quality of corn it grows. Each kernel of each hybrid carries exactly the same heredity and produces the same type of corn regardless of its size and shape.



COLD TESTS

As a double-check on Pioneer's germination, representative samples of all seed is actually planted in outdoor gardens under the adverse conditions of early March. To survive these unusually rigid tests requires seed with stamina and strength far in excess of the actual growing conditions usually found in your fields.



PLANTED IN OUTDOOR GARDENS IN
MARCH.

SCIENTIFIC BREEDING



Raymond F. Baker



Murray Brawner

PIONEER CORN BREEDERS

This staff of Scientific Corn Breeders is constantly working in their laboratory—the rich soil of the corn belt—to develop and produce hybrid seed corn of superior quality and outstanding performance.



Perry M. Collins



Samuel F. Goodsell



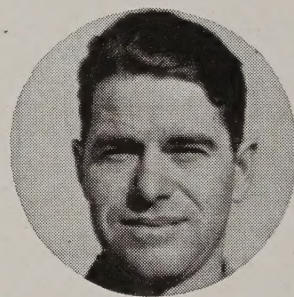
Karl Jarvis



A. R. Marston



Ray Snyder



Melvin Temple



James Weatherspoon

INBREEDING—First Step

By inbreeding well selected ears, varied plant types are developed. Some off-spring are outstandingly strong and vigorous, while others are weak and useless. Each year Pioneer Breeders discard hundreds of thousands of weak plants, saving only desirable types for further development.



ONLY THE STRONG OFFSPRING ARE SAVED



UNIFORMITY OF PIONEER INBRED STRAINS

After many years of careful inbreeding, the weak and undesirable characteristics are weeded out. Only the strongest plants survive the vigorous inbreeding period of from five to eight generations.

The result is a pure inbred—small, frail in appearance, but uniform and true to definite characteristics, such as—disease resistance—plant height—stiffness of stalk—heaviness of root system—size of ear—color of leaf and ear height. An inbred strain remains pure and breeds true to its characteristics as long as foreign pollen does not contaminate it.

OF PIONEER HYBRIDS

EXPERIMENTAL TESTING HYBRID CROSSES—Second Step



POLLEN BAGS ON TASSELS

Pioneer Breeders make about 375,000 hand-pollinations every year.

Out of the hundreds of "single-crosses" produced every year, only a portion are good enough for experimental work in final "four-way crosses"

Of the hundreds of final crosses made year after year by Pioneer, only a small number prove superior to those already produced.

These few outstanding combinations are then grown and tested for a number of years in the localities where they may be sold if they continue to be superior.



SMALL INBREDS CROSSED PRODUCE HYBRID



LOCATIONS showing large yield test plots where Pioneer hybrid crosses are tested



TESTING THE YIELD

FINAL "FOUR WAY" HYBRID CROSS—Third Step

Pioneer hybrid seed corn is produced in large crossing fields near modern drying and grading plants.

Detasseling the fields from twelve to fifteen times each season requires hundreds of capable men and women.

Pioneer hybrid seed corn is picked only from the detasseled rows. The corn on the male rows is self-pollinated and is not used as hybrid seed.



HUNDREDS DETASSEL PIONEER FIELDS



PULLING A TASSEL



DETASSELED FIELD OF PIONEER

PIONEER

Hybrids for

359

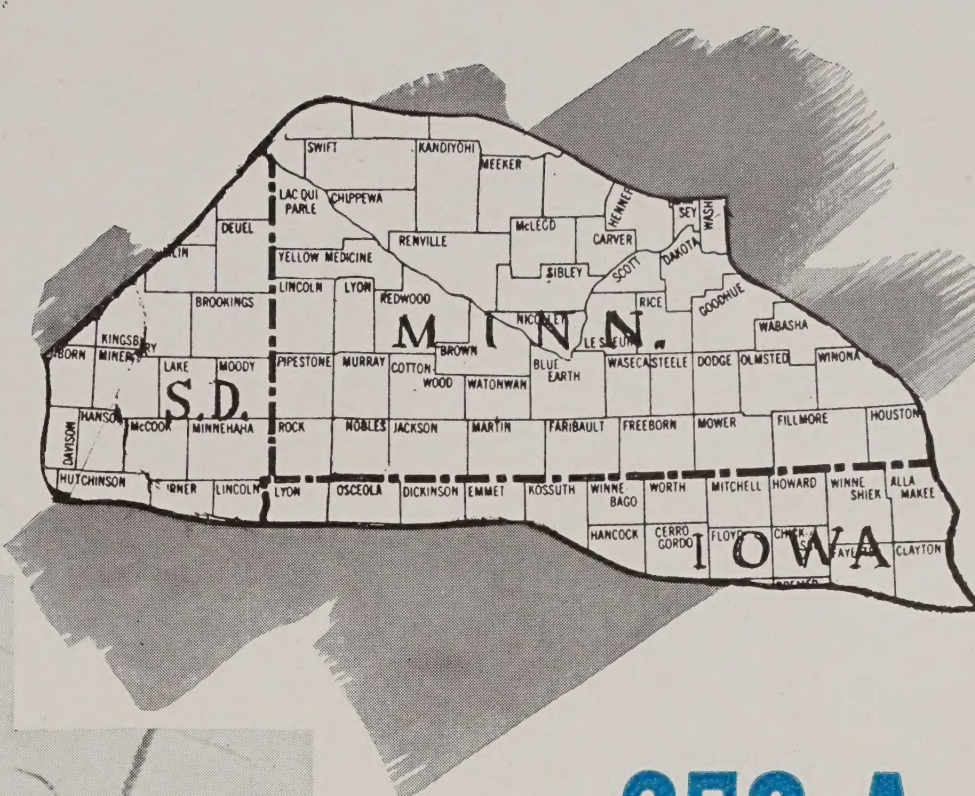
PIONEER'S EARLIEST HYBRID

A new early hybrid. Produces a good yield for an early corn. Early maturing, very uniform golden yellow, fine quality ears of medium size . . . deep, soft starch kernels . . . small, quick drying cobs . . . short, very stiff stalks . . . beautiful, dark green foliage . . . resistant to lodging, ear dropping, smut and drought. Picks well by hand or machine.



NORTHERN CORN BELT

Also see pages 8-9-10-11



358-A

BIG EARS—STRONG ROOTS

A new hybrid similar to 358 but with stronger roots—medium height ears. Better adapted to all types of soil than 358. Top quality feeding corn with large rugged cylindrical ears—deep soft starch kernels—somewhat variable in type. Stiff stalks. Produces abundant yields of good sound corn.

PIONEER

Hybrids for

355

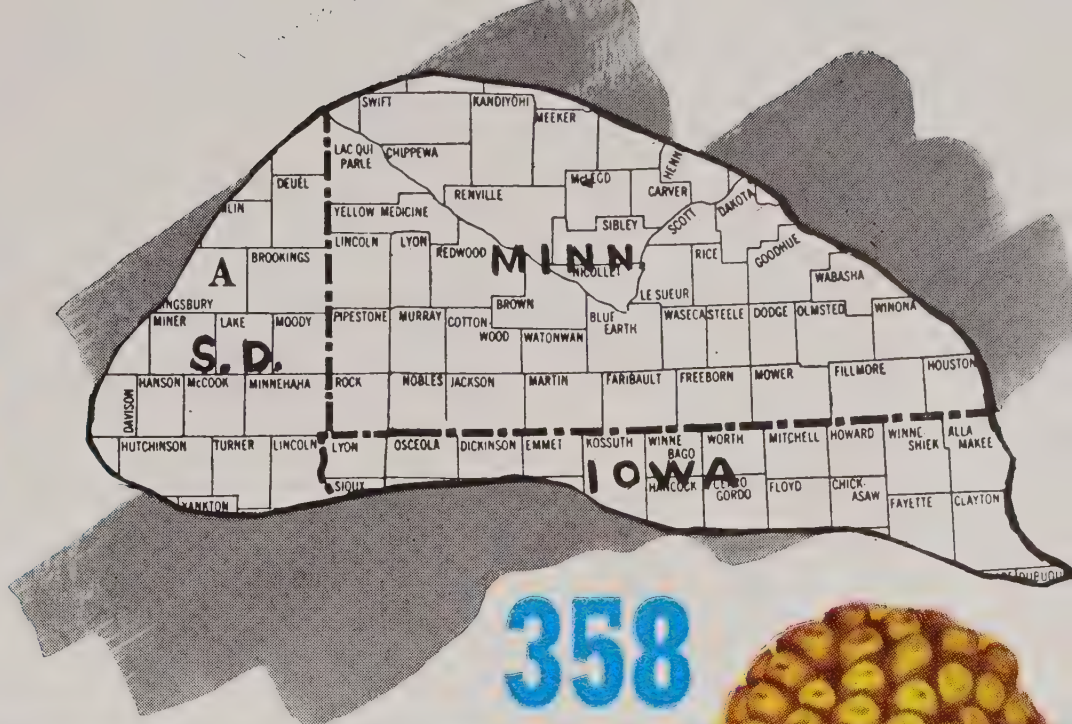
For COLD, WET SOIL

This hybrid is a favorite among some Northern farmers, because of its ability to produce corn on cold, wet soil and on peat or alkali—fast, vigorous growth—sound, uniform ears—medium hard kernels on a small cob. When planted on high nitrogen soil it develops long shanks and may smut under unfavorable conditions.



NORTHERN CORN BELT

Also see pages 6-7-10-11



BIG EARS—SHORT STALKS

358 produces top quality feeding corn with large, rugged, cylindrical shaped ears . . . deep, soft starch kernels . . . small stiff stalks . . . low and even ear height . . . does best on rich soil. Produces good yields of sound corn. Occasional root lodging and ear dropping late in the season.

PIONEER

Hybrids for

TOP QUALITY—HIGH YIELD

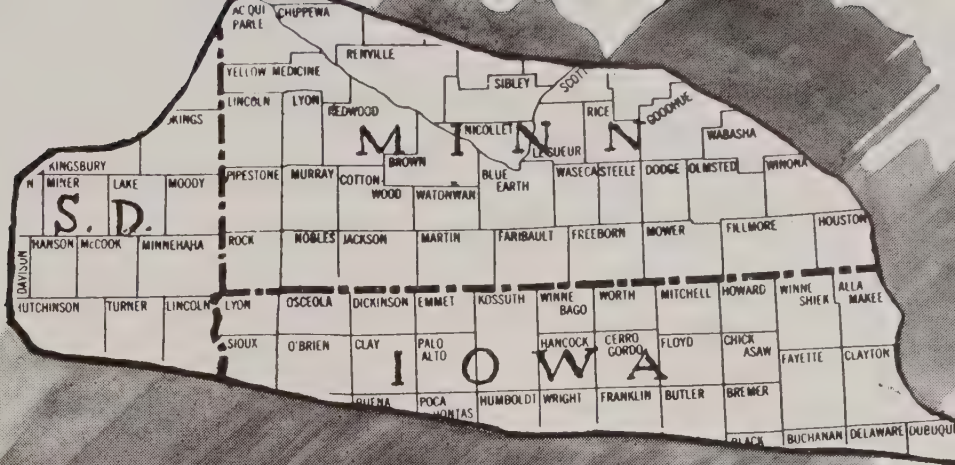
A real profit maker, producing attractive ears. Has very deep, medium soft starch kernels—small, fast drying cobs—gives you extra high yield—adapted maturity—strong roots—heavy, dark green foliage—resistant to drought and smut—shells very little when picked by machine. Many times its yield is under-estimated early in the season because of ear height variation. Occasionally subject to stalk breaking in late fall.



353-A

NORTHERN CORN BELT

Also see pages 6-7-8-9



THICK—CHUNKY EARS

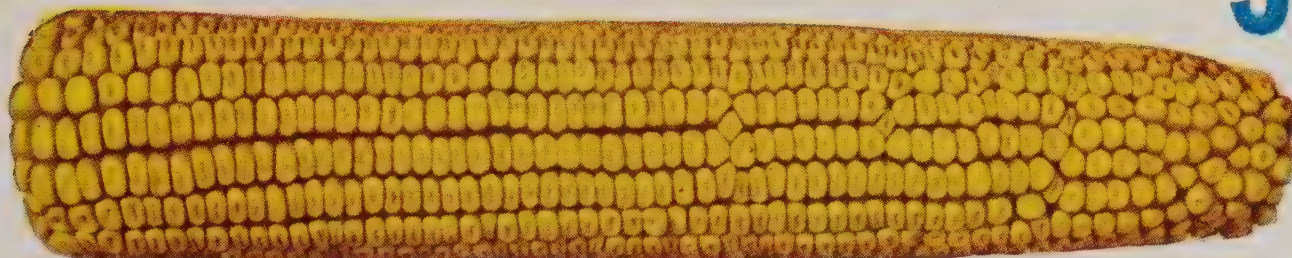
353



A very high yielding hybrid made to order for fattening your cattle and hogs. Yields medium size, cylindrical shaped ears with very deep, soft starch kernels on a small, fast drying cob. Gives highest yields of sound, golden color grain and usually stands up better than any other hybrid in the same field. Mechanical pickers may leave some husks on the ears but practically no ears and very little shelled corn is left on the ground. Not well adapted to hand husking.

LONG EARS—EASY TO PICK

373



Long, attractive ears line the rows of the average field of 373 and each ear is packed with deep, sound kernels on a small, fast drying cob. The medium soft starch texture of this grain makes fast gains on cattle and sells at top market prices. Has splendid field appearance . . . heavy yield and is resistant to ear dropping. Subject to stalk breaking in late fall when planted on high nitrogen soil. Husks very easy by hand and picks very well with a machine, even though some stalks are broken.

SUMMARY OF CHARACTERISTICS

PIONEER of Hybrids

| PIONEER..... | 359 | 355 | 358-A | 358 | 353-A | 353 | 373 | 322 | 341 | 330 | 340 | 331 | 333 | 334 | 300 | 317 | 336 | 304 |
|---|-------------|---------------|-------------|-------------|-------------|-------------|-------------|---------------|------------|-------------|-------------|----------|-------------|-------------|----------|------------|----------|------------|
| STRENGTH OF ROOTS..... | VERY STRONG | STRONG | VERY STRONG | FAIR | VERY STRONG | VERY STRONG | STRONG | VERY STRONG | STRONG | VERY STRONG | STRONG | STRONG | VERY STRONG | FAIR | FAIR | STRONG | STRONG | STRONG |
| STIFFNESS OF STALKS..... | VERY STIFF | VERY STIFF | VERY STIFF | VERY STIFF | STIFF | VERY STIFF | FAIR | FAIR | VERY STIFF | VERY STIFF | EXCELL'T | STIFF | VERY STIFF | STIFF | STIFF | STIFF | STIFF | VERY STIFF |
| EAR DROPPING RESISTANCE..... | EXCELL'T | GOOD | GOOD | GOOD | EXCELL'T | EXCELL'T | GOOD | EXCELL'T | EXCELL'T | GOOD | EXCELL'T | GOOD | EXCELL'T | GOOD | GOOD | EXCELL'T | GOOD | EXCELL'T |
| ADAPTATION TO HAND PICKING..... | EXCELL'T | GOOD | EXCELL'T | EXCELL'T | GOOD | FAIR | GOOD | GOOD | EXCELL'T | EXCELL'T | EXCELL'T | EXCELL'T | FAIR | GOOD | GOOD | GOOD | EXCELL'T | FAIR |
| CLEANNESS OF HUSKING WITH MACHINE PICKER..... | CLEAN | CLEAN | CLEAN | CLEAN | CLEAN | FAIR | VERY CLEAN | VERY CLEAN | CLEAN | VERY CLEAN | CLEAN | CLEAN | CLEAN | CLEAN | CLEAN | VERY CLEAN | CLEAN | FAIR |
| SHELLING RESISTANCE WHEN PICKED WITH MACHINE..... | GOOD | GOOD | GOOD | GOOD | EXCELL'T | EXCELL'T | GOOD | FAIR | EXCELL'T | EXCELL'T | GOOD | EXCELL'T | FAIR | EXCELL'T | GOOD | FAIR | EXCELL'T | GOOD |
| LENGTH OF SHANK..... | MEDIUM | LONG | MEDIUM | MEDIUM | MEDIUM | MEDIUM | MEDIUM | SHORT | MEDIUM | SHORT | MEDIUM | MEDIUM | MEDIUM | MEDIUM | MEDIUM | MEDIUM | MEDIUM | SHORT |
| EARS PER STALK..... | ONE | Sometimes TWO | ONE | ONE | ONE | ONE | ONE | Sometimes TWO | ONE | ONE | ONE | ONE | ONE | ONE | ONE | ONE | ONE | ONE |
| EAR HEIGHT..... | LOW | MEDIUM | MEDIUM | LOW | HIGH | MEDIUM | MEDIUM | HIGH | LOW | LOW | MEDIUM | MEDIUM | MEDIUM | MEDIUM | HIGH | MEDIUM | MEDIUM | MEDIUM |
| LENGTH OF EARS..... | MEDIUM | LONG | MEDIUM | MEDIUM | LONG | MEDIUM | LONG | MEDIUM | MEDIUM | MEDIUM | LONG | LONG | MEDIUM | LONG | MEDIUM | MEDIUM | LONG | LONG |
| HARDNESS OF KERNEL STARCH..... | MEDIUM SOFT | MEDIUM HARD | MEDIUM SOFT | MEDIUM SOFT | MEDIUM SOFT | MEDIUM SOFT | MEDIUM SOFT | MEDIUM SOFT | SOFT | SOFT | MEDIUM SOFT | SOFT | MEDIUM | MEDIUM SOFT | SOFT | MEDIUM | SOFT | MEDIUM |
| LENGTH OF HUSK..... | LONG | SHORT | MEDIUM | MEDIUM | MEDIUM | MEDIUM | MEDIUM | MEDIUM | MEDIUM | MEDIUM | LONG | LONG | MEDIUM | LONG | LONG | LONG | MEDIUM | MEDIUM |
| SMUT RESISTANCE..... | EXCELL'T | FAIR | GOOD | GOOD | GOOD | GOOD | GOOD | EXCELL'T | GOOD | EXCELL'T | EXCELL'T | EXCELL'T | EXCELL'T | EXCELL'T | EXCELL'T | EXCELL'T | GOOD | GOOD |
| DROUGHT RESISTANCE..... | GOOD | GOOD | GOOD | GOOD | EXCELL'T | EXCELL'T | GOOD | EXCELL'T | GOOD | GOOD | EXCELL'T | EXCELL'T | GOOD | EXCELL'T | EXCELL'T | EXCELL'T | EXCELL'T | EXCELL'T |

The characteristics of the hybrids listed above are based on comparisons with the average Pioneer hybrid—not on comparisons with the open-pollinated corn or competitive hybrids. For instance, where a hybrid rates "Fair" for "Stiffness of Stalk" in these tables, it would actually rate "Very Stiff" if compared under open-pollinated standards.

ESTIMATED MATURITY DIFFERENCES AMONG PIONEER HYBRIDS IN DAYS

EARLIEST

ONE WEEK

ONE WEEK

ONE WEEK

ONE WEEK

ONE WEEK

LATEST

359 355 358-A 358 373 353-A 353 322 341 330 331 340 333 334 317 336 300 304

SELECT THE HYBRID WITH THE MATURITY ADAPTED TO YOUR LOCALITY

PIONEER

Hybrids for

SMALL, QUICK DRYING COBS

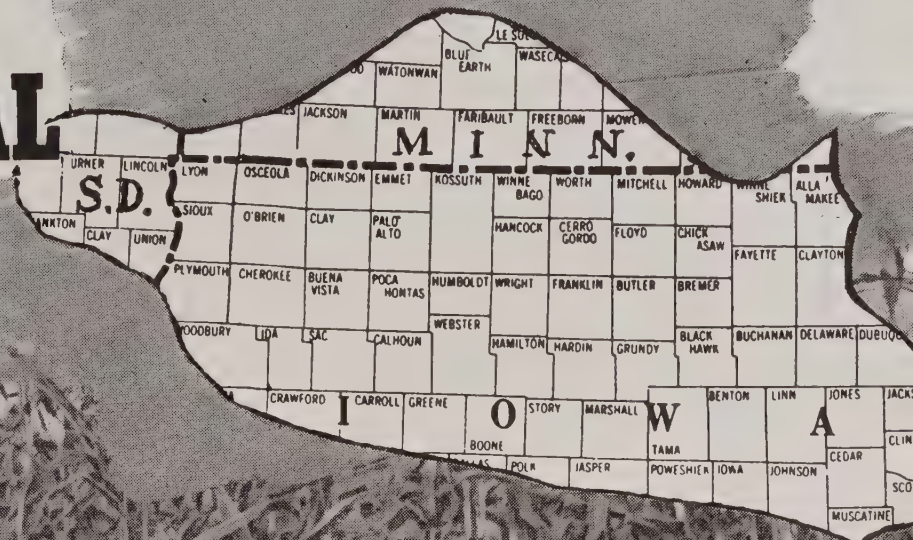
322



PICKS CLEAN BY MACHINE

Here is an old standby . . . a high yielding, general purpose corn with a record that is hard to beat. Ears are of variable height and of medium length, sometimes two on a stalk . . . kernels medium soft starch . . . small, fast drying cobs . . . stalks with plenty of foliage . . . resistant to drought, smut and ear dropping. Usually over-runs measured cribs 5 to 15% when shelled and picks clean by machine. High nitrogen soil tends to cause stalk breaking in the fall.

NORTHERN AND NORTH CENTRAL CORN BELT



EARS HANG EVEN and LOW

Livestock feeders like the soft starch texture of this hybrid—cash grain farmers like it for its heavy yield and high shelling percentage. Everyone likes it for its uniformity. Has cylindrical shaped ears—deep, medium soft starch kernels. Very easy to pick by hand—good for machine picking. Resistant to ear dropping. Ear height may be too low on thin soil.



341

PIONEER

Hybrids for

330

UNIFORM QUALITY EARS

330 is one of the most popular hybrids because of its consistent performance year after year, when planted on fertile soil. Yield usually over-runs estimates . . . rugged ears of uniform size and type . . . soft starch kernels make excellent feed . . . very strong root system . . . resistant to smut and harvests easily by hand or machine. Occasionally stalk breaks in midsummer but has unusually stiff stalks in the fall except on alkali. For "all around" performance, 330 is a hybrid that is hard to beat.



NORTH CENTRAL AND CENTRAL CORN BELT



GOOD FEEDING CORN

340 has the reputation of being "tops" for feed as well as marketing. Usually out-yields other corn in the same field—large, good quality ears—kernels medium soft starch—stiff stalks with heavy dark green foliage—ears hang even and at medium height—does well on thin soil. Tends to resist midsummer stalk breaking some better than 330.



PIONEER

Hybrids for

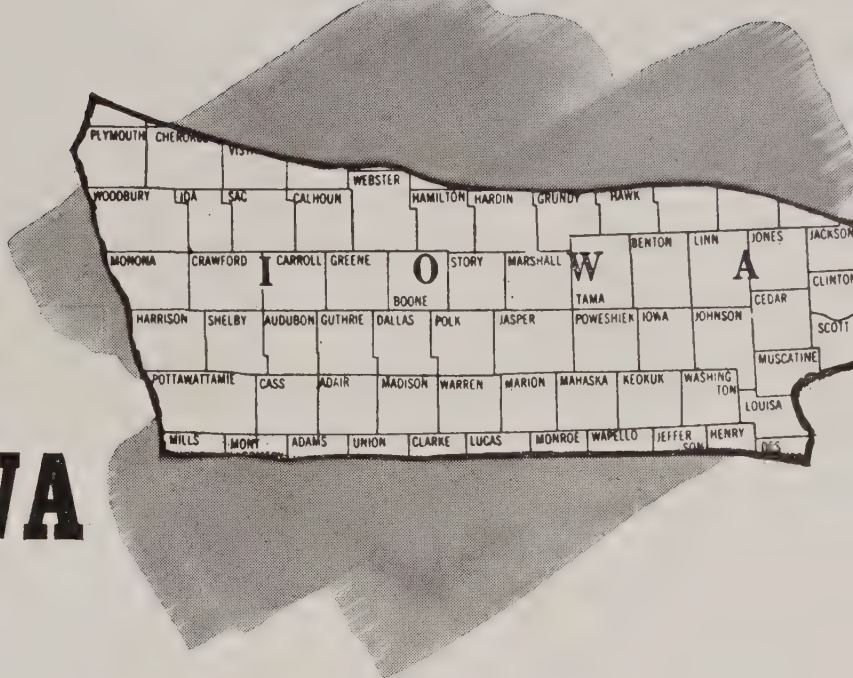
HUSKS EASY BY HAND

A new Pioneer hybrid with an ear-type very similar to 330. Between 330 and 334 in maturity. Uniform ears—deep, medium soft kernels—ability to adapt itself to different soil types. Occasionally stalk breaks in midsummer but has very stiff stalks in the fall. It husks easy by hand and picks well with machine. Some ears hang high on the stalk.



331

CENTRAL AND SOUTHERN IOWA



333

VERY STIFF STALKS

This hybrid is resistant to lodging—stalks stand up throughout the corn season like a field of soldiers “at attention”. Excellent yield record. Growers like the deep kernels and small, fast drying cobs—foliage is dark green—northern and north central farmers praise it for silage. Resistant to ear dropping and smut. Is not particularly easy to pick by hand and shells some with a picker.



334

SOFT STARCH KERNELS

In addition to yielding a bountiful crop of rugged-looking ears, the deep kernels are medium-soft starch and of excellent quality. Does well on a wide variety of soil types and resists smut, mold and drought. The beautiful dark green foliage stamps this as a “healthy” hybrid. Easy to husk with a picker. Root lodges under some conditions.



PIONEER

Hybrids for

300

YIELDS ABUNDANTLY

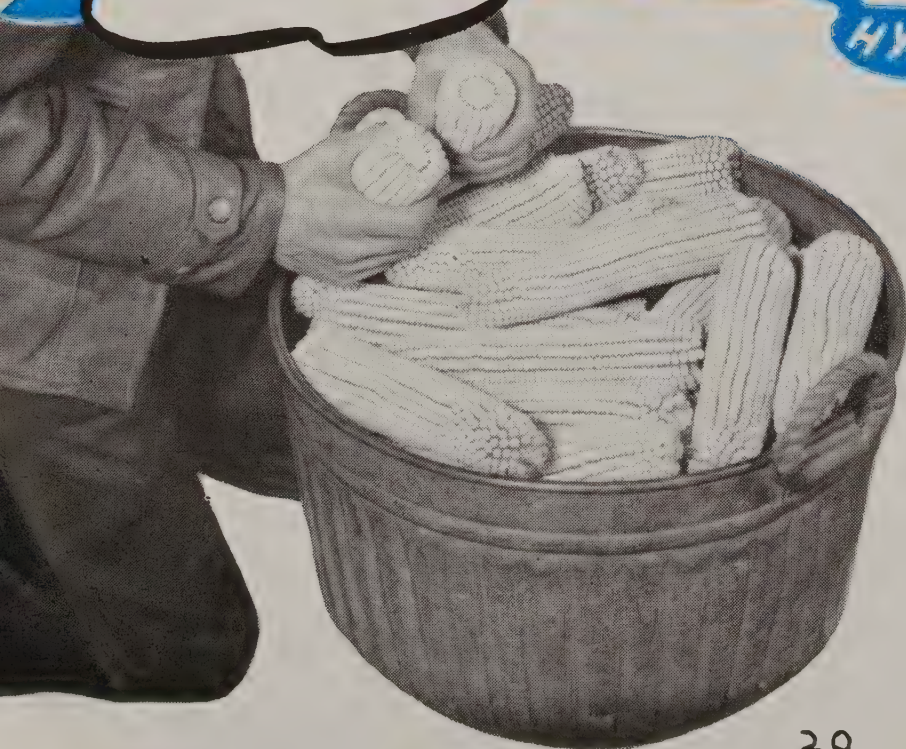
Many farmers call 300 "Old Reliable" because of its dependable yield and good quality feed. Has big, rough dent, straight rowed, "show type" ears—uniformly large from butt to tip—soft starch, wide and deep kernels—stiff stalks and dark green foliage. Root lodges in some seasons. Easy to husk by hand and picks well by machine. Resistant to smut and drought. On fertile soil it grows tall and ears are high.



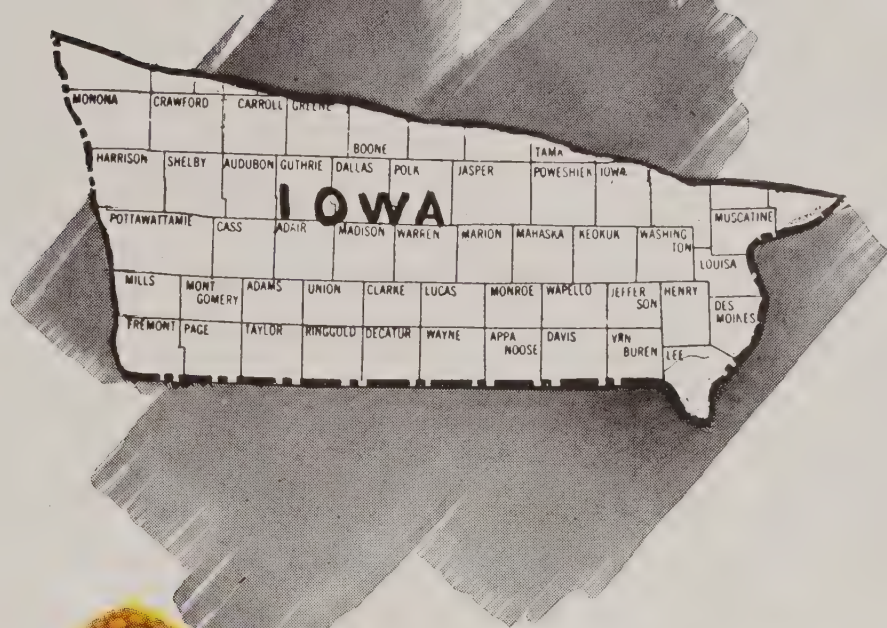
Pioneer

THE PROVEN

HYBRID



SOUTHERN IOWA



317

DOES WELL ON THIN GROUND

Here is a hybrid particularly adapted to Southern Iowa. Has one large, single ear to a stalk—medium low ear height—medium height stalks and does well on thin soil. Long husks protect the ears from smut, mold and tip damage. Its vigorous, leafy, stiff stalks resist breaking through the entire corn season. Tapering ears are well filled with lemon yellow kernels.



336

LONG EARS

For those growers who prefer a long eared, high yielding hybrid, here is one that performs well on all soil types. Its deep, medium-soft starch kernels make good feeding corn for both cattle and hogs. Has dark green, medium height stalks, usually with one big ear—stiff stalks—stands up well—good for hand and mechanical picking. On rich ground, it grows tall and ears hang high.



PIONEER 304 is a promising new hybrid for Southern Iowa. See pages 12, 13 and 22 for characteristics and record.


PIONEER

Performance Ratings

BASED ON AVERAGE RESULTS FROM PIONEER YIELD TESTS


Records shown below under each of the 3 maturity belts are based on averages of several years of testing in Pioneer hand planted, replicated test fields. Twenty hills of each entry are planted in six different locations in each field and averaged at harvest time. A number of fields are planted annually in each maturity belt and results averaged. Then results of preceding years are averaged with latest figures.

NORTHERN CORN BELT

|  | Pioneer Number | Average Yield Per Acre | Average Moisture Oct. 15 | Root Lodging Resistance Grade—The Higher the Better | Average Number Broken Stalks Per 100 Stalks | Average Number Dropped Ears Per 100 Stalks | Average Ear Height |
|--|----------------|------------------------|--------------------------|---|---|--|--------------------|
| | 359 | 67 bu. | 16.6% | 85 | 2 | .2 | 40 in. |
| | 355 | 68 | 16.9 | 70 | 4 | .8 | 46 |
| | 358A | 68 | 17.3 | 75 | 3 | .4 | 42 |
| | 358 | 65 | 17.6 | 65 | 4 | .7 | 39 |
| | 373 | 70 | 17.9 | 70 | 10 | .5 | 48 |
| | 353A | 74 | 19.0 | 80 | 6 | .7 | 54 |
| | 353 | 75 | 19.0 | 80 | 3 | .3 | 52 |
| | 322 | 75 | 20.8 | 85 | 9 | .5 | 56 |
| | 341 | 76 | 21.0 | 75 | 5 | .4 | 48 |

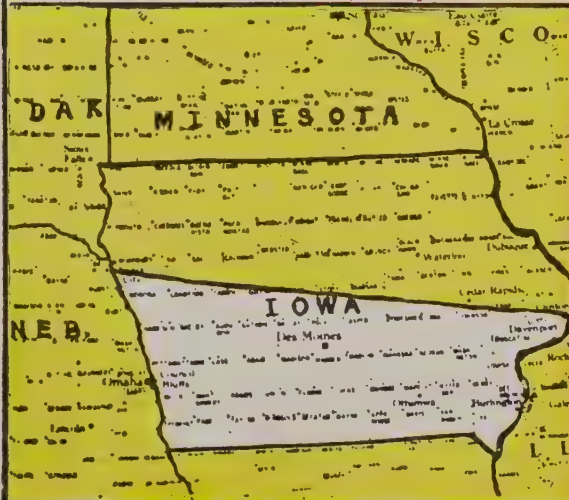
Listed According To Moisture Content

NORTHERN and NORTH CENTRAL CORN BELT

|  | Pioneer Number | Average Yield Per Acre | Average Moisture Oct. 15 | Root Lodging Resistance Grade—The Higher the Better | Average Number Broken Stalks Per 100 Stalks | Average Number Dropped Ears Per 100 Stalks | Average Ear Height |
|---|----------------|------------------------|--------------------------|---|---|--|--------------------|
| | 353A | 70 bu. | 15.8% | 76 | 5 | .3 | 51 in. |
| | 353 | 71 | 15.9 | 77 | 2 | .2 | 48 |
| | 322 | 72 | 16.6 | 77 | 11 | .4 | 53 |
| | 341 | 74 | 16.9 | 75 | 4 | .3 | 43 |
| | 340 | 78 | 17.4 | 80 | 3 | .2 | 49 |
| | 330 | 75 | 17.4 | 88 | 3 | .7 | 47 |
| | 331 | 73 | 17.7 | 75 | 4 | .7 | 53 |
| | 333 | 76 | 18.2 | 78 | 3 | .2 | 55 |
| | 334 | 75 | 18.9 | 65 | 5 | .3 | 56 |

Listed According To Moisture Content

CENTRAL and SOUTHERN IOWA CORN BELT

|  | Pioneer Number | Average Yield Per Acre | Average Moisture Oct. 15 | Root Lodging Resistance Grade—The Higher the Better | Average Number Broken Stalks Per 100 Stalks | Average Number Dropped Ears Per 100 Stalks | Average Ear Height |
|---|----------------|------------------------|--------------------------|---|---|--|--------------------|
| | 330 | 71 bu. | 15.2% | 92 | 1 | 1.4 | 43 in. |
| | 340 | 72 | 15.3 | 82 | 1 | .7 | 45 |
| | 331 | 69 | 15.5 | 80 | 2 | 1.2 | 50 |
| | 333 | 72 | 16.0 | 92 | 2 | .7 | 50 |
| | 334 | 72 | 16.0 | 77 | 5 | 1.2 | 50 |
| | 317 | 72 | 16.3 | 85 | 3 | .8 | 49 |
| | 336 | 76 | 16.5 | 81 | 3 | 1.2 | 54 |
| | 300 | 76 | 17.0 | 76 | 3 | .8 | 55 |
| | 304 | 78 | 18.0 | 79 | 3 | .5 | 50 |

Listed According To Moisture Content

PIONEER HI-BRED CORN COMPANY

First Commercial Producer of Hybrid Seed Corn



TELEPHONE 4-3245

114 11TH STREET
DES MOINES, IOWA

February
1 9 4 4

HERE IS YOUR

1 9 4 5

PIONEER SEED CORN GUIDE

To help you select the hybrids best adapted to your needs, we have described the outstanding characteristics of each. In addition, we have described those traits that sometimes develop under unfavorable conditions.

Even though we are planning an appreciable increase in seed acreage this summer, we sincerely believe that ALL Pioneer seed corn which we will be able to grow in 1944 for delivery in 1945, will be ordered this spring.

A Conditional Order PROTECTS You

PIONEER'S Conditional Order Plan makes it easy for you to order seed now for next year - - - and with NO DOWN PAYMENT at this time.

If you wish you can . . .

1. Change your order this fall, or
2. Cancel your order completely this fall.

To guard against selling more corn than we will produce, each Pioneer representative has been given a limit on the amount of seed he will be permitted to sell this spring for delivery next year. When this allotted amount has been sold, he will be unable to accept additional orders for Pioneer, unless the crop is quite large this fall.

ORDER NOW to plant in 1945

We suggest you give your Pioneer representative a Conditional Order early this spring, if you want Pioneer seed in 1945. If you do not know your local Pioneer representative, write to us and we will send his name and address.

Yours very truly,

Nelson Urban

PIONEER HI-BRED CORN COMPANY



P.S. Over 60,000 Pioneer customers placed their orders for 1944 last spring and reserved over 80% of our crop. The 1943 crop was 30,000 bushels larger than the 1942 crop.

DRYING PLANTS IN IOWA

REINBECK DURANT MARENGO ALGONA DYSART JOHNSTON DOWNEY CLARION

PIONEER



fights
the **CORN BORER**

1944

10 YEARS SALES GAIN

Sales

in the
HEART
of the

Corn Borer Area

1934

10 Interesting Facts

about the

CORN BORER

European Corn borer entered America sometime between 1909 and 1913 in shipments of broom corn from Europe.

It was first discovered in 1917 working in sweet corn in New York State.

In Canada in 1926, it destroyed some four hundred thousand acres of corn.

Canada has since controlled the borer by good cleanup practices.

Each corn borer moth can lay as many as 500 eggs. These eggs hatch out in about a week's time.

Corn borers shed their skin five times while growing, as he gets too big for his clothes.

Corn borers when growing do not like hot, dry weather and many die under drought conditions.

The northern corn belt has one brood of borer a year while the central corn belt has two or more a year.

Corn borers live over the winter as the worm in the cornstalks or stubble.

Corn borers plowed under, usually come to the surface, where he will die if he does not have something in which to harbor. Clean plowing is one of the best control measures when the surface is left free of all refuse.

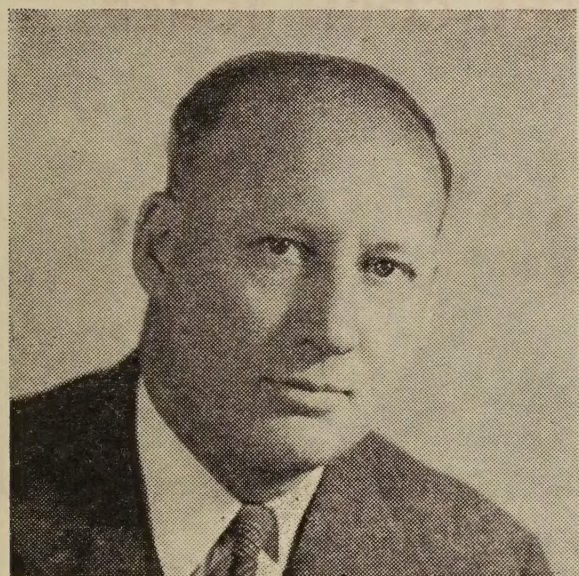


PIONEER *fights* **the CORN BORER**

PIONEER SCIENTIFIC RESEARCH

Pioneer Scientists are continually conducting extensive tests on Pioneer Hybrids under the CORN BORER conditions.

Pioneer Hybrids have been developed with the stamina and TOLERANCE to successfully mature and produce high yields in those fields where the corn borer may be present.



PIONEER'S CORN BORER SPECIALIST

A. R. MARSTON supervises our Corn Borer Research. For many years he has been studying the habits, weaknesses and methods of control of the corn borer—right in the heart of the corn borer area.

This long experience in corn borer studies and corn breeding makes him highly qualified to head Pioneer's Corn Borer Research Staff:

8 years—Superintendent of Michigan State Corn Borer Experimental Station.

8 years—In charge of all Michigan State College Corn Breeding.

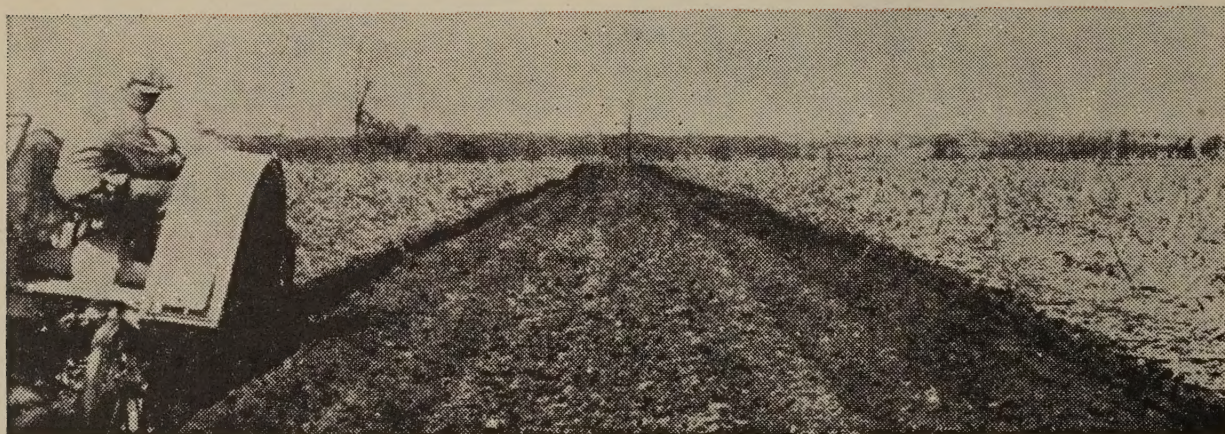
PIONEER bred for **TOLERANCE**



Stands Up Until Harvested

Pioneer TOLERANT hybrids are rugged . . . stiff, sturdy-stalked . . . and strong-shanked varieties. They can stand and produce high yields of quality corn, even though the corn borer may be present.

HOW TO COMBAT THE CORN BORER



Clean Plowing Kills the Corn Borer

1. Plant TOLERANT hybrids.
2. Cut low . . . shred fodder . . . put in silo where possible.
3. PLOW UNDER all stalks and stubble cleanly.
4. Do not drill small grain in standing stalks or stubble.
5. Do not plant too early.

Plant

PIONEER

THE
Tolerant
HYBRID

PIONEER

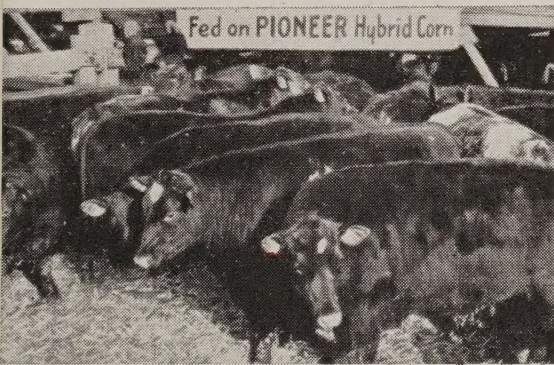
The CORN of PLENTY



EXCELLENT FEED

PIONEER puts 'Top Finish'
on the
Carlot Champions

Pioneer 'fed and finished' cattle and hogs have won Grand Championship awards in the Chicago Fat Stock Carlot Competition for the past 5 years. With its heavy yields—its solid, soft starch deep grain and small cobbled ears, Pioneer hybrid is rightfully known as 'The Corn or Plenty'.



BIG YIELDS

PIONEER continues to LEAD
in Field, Feed Lot and Test Plot

Pioneer continues to lead—in high yield, under all kinds of growing conditions and on many different soil types—in thousands of farmers' fields everywhere—and in official state yield test plots. Pioneer corn has proven itself to be consistently superior and the "Blue Ribbon" hybrid of the field, feed lot and test plot.



SMALL COBS
BIG KERNELS



Replanting Agreement

PROTECTS YOU

REPLANTING AGREEMENT

If, because of cutworms, floods or ANY other reason the stand of corn upon any field planted with PIONEER corn shall be so impaired or diminished that the customer DISCS UP AND REPLANTS IT TO CORN, we will furnish him free of any charge except transportation costs, a quantity of PIONEER seed equal to that required for such planting. To take advantage of this benefit all the customer needs to do is to notify in writing the Company or its sales representative through whom the seed was purchased in time to permit inspection of the field before it is disced up.

If we have no seed of suitable maturity available for replanting, we reserve the right to furnish an equal amount of PIONEER seed FREE for 1945 planting.

PIONEER HY-BRED CORN COMPANY
Des Moines, Iowa

**FREE
SEED**

MAY SAVE YOU MANY DOLLARS

This Pioneer Replanting Agreement protects you against extra seed expense if you find it necessary to disc up and replant to corn any Pioneer hybrid field or portion of a field. You yourself decide whether or not you should replant. You are the sole judge. Every bushel of Pioneer is backed by this written agreement which may save you many dollars. It entitles you to free seed if you replant your Pioneer field to corn for any reason whatsoever—whether it's due to bad weather—insects—worms—birds—squirrels—mistakes in planting or any other reason. All you have to do is notify your local Pioneer representative who will serve you quickly and courteously.

PIONEER

HI-BRED CORN CO.
DES MOINES, IOWA